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09/904,166	07/12/2001	Daisuke Shinomiya	FUJZ 18.830	2508

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EXAMINER
PATEL, JAY P

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/904,166	SHINOMIYA, DAISUKE
	Examiner	Art Unit	
	Jay P. Patel	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6,8-10,13-15,23 and 24</u> is/are rejected.

7)☒ Claim(s) <u>7, 11-12 and 16-22</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the arguments/remarks received on

08/03/2006.

2.   Claims 1-24 are pending.

3.   Claims 1-6, 8-10, 13-15 and 23-24 are rejected.

4.   Claims 7, 11-12 and 16-22 are objected.

5.   The amendment to the specification submitted on 08/03/2006 has been

accepted.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-10, 13-15 and 23-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ma et al. (US Patent 5953338) in view of a Hebert (US Patent

6732186 B1).

8.   In regards to claim 1, Ma discloses in figure 3 various physical interfaces (310,

312, 314 and 316) to transfer voice and data information for their respective clients

(clients A and B). Client A uses physical interface 310 for voice traffic and physical

interface 312 for data traffic and client B uses physical interface 314 for voice traffic and

physical interface 316 for data traffic (see figure 3 and column 9, lines 5-13). The

various traffic types are consolidated into a single ATM interface 302 through an ATM

edge switch. The controller for aggregating a plurality of physical links into a single

logical link reads on the ATM edge switch. The various physical interfaces (310-316 in

figure 3) read on a plurality of physical links and the ATM interface 302 reads on a

single logical link.

Ma also discloses in figure 6 a view of the use of virtual path groups in the ATM

interface for clients A and B with varying traffic types. Virtual path groups 601 and 602

are assigned to clients A and B respectively; specific virtual path within the virtual path

group are allocated to carry various traffic types (see figure 6 and column 12, lines 4-

18). The distributor for distributing a traffic to a sub-logical link reads on the virtual path

group and the virtual paths themselves read on the sub-logical link into which specific

ones of the physical link are aggregated to meet a specified condition of the traffic.

Ma fails to disclose aggregating a plurality of physical links over an Ethernet

network. Hebert discloses the above-mentioned limitation. In figure 8, Hebert discloses

fast Ethernet links 810A-810D combined into a logical link (Trunk) (see figure 8 and

column 9, lines 45-60). Thus, since the links 810A-810D are fast Ethernet links, the

aggregation takes place over an Ethernet network.

Therefore it would have been obvious at the time the invention was made to

modify the allocation of virtual path groups in an ATM network disclosed by Ma to carry

the traffic over an Ethernet network. The advantage of the modification would be to

provide the provision of virtual path groups over an Ethernet network to support

combining of similar types of traffic from a source to a destination. The motivation to

modify would be to combine the similar traffic types to transport over a high-speed bandwidth packet base network such as Ethernet.

In regards to claim 2, Ma discloses in figure 1A a centralized call admission control/usage monitor module 145 that takes appropriate actions to guarantee a level of service specified by the client contract agreement (see figure 1A and column 7, lines 51-53). The traffic monitor for monitoring a traffic amount, which meets a specified condition, reads on the centralized call admission control/usage monitor module 145. In further regards to claim 2, Ma also discloses in figure 1A a centralized control module 160 that considers parameters set in service contract agreements with the clients for the allocation of an available bandwidth for virtual paths and virtual channels (see figure 1A and column 7, lines 43-47). The manager for assigning the physical links of a number corresponding to the traffic amount to the sub-logical link reads on the centralized control module 160.

In regards to claim 3, Ma discloses that CAC control/usage monitor module 145 determines what virtual paths and virtual channels are needed and ultimately will be connected depending upon factors such as customer service agreement, traffic type, QoS and traffic load. Based on the current load conditions, CAC 145 instructs bandwidth manager module 150 to dynamically adjust the size of each virtual path, virtual channel and virtual path group; The ATM switch 130K can adjust, alter, create or destroy the actual size of the virtual path as instructed by the bandwidth manager 150 (see figure 1A and column 7, lines 20-34). Therefore, the band control device detecting that the traffic amount becomes smaller than a predetermined value during a

predetermined period reads on the CAC 145's ability of monitor load conditions. And, the traffic monitor releasing an aggregation of the sub-logical link to assign no sub-logical link exclusively used for the traffic, which meets the specific condition, reads on the ATM switch's ability to destroy the actual size of the virtual path.

In regards to claim 4, Ma discloses that when a client using a virtual private network (VPN) exceeds its customer agreement, it can borrow (request to borrow) addition bandwidth from the VPN provider (see column 7, lines 56-60). Therefore, the controller transmitting/receiving a message for establishing the sub-logical link to/from an opposite controller reads on the client (opposite controller) borrowing bandwidth from the VPN provider (controller).

In regards to claim 5, Ma discloses that if a specific client is not using all of the capacity, which the client has a reservation or a right to use, this capacity is made available to other clients (see column 8, lines 56-59). Therefore, the controller relaying the message to a subsequent apparatus read on the dynamic allocation of unused bandwidth from one client to another.

In regards to claim 6, as stated above, Ma discloses in figure 6 a view of the use of virtual path groups in the ATM interface for clients A and B with varying traffic types. The ATM interface is composed of virtual path groups 601 and 602, which contain virtual paths 603-608 respectively. Therefore, the number of physical links aggregated in the sub-logical link read on the virtual paths 603-608 with in the virtual path groups 601 and 602; furthermore, the ATM interface reads on the logical link. Also as evident

from the figure, the virtual paths within the virtual groups 601 and 602 are smaller than

the combined virtual paths within the ATM interface.

In regards to claim 8, wherein the controller returns a response message for the

received message reads on the disclosure that the borrowed bandwidth requests are

tagged and returned to the client (see column 7, lines 61-62).

In regards to claims 9 and 10, Ma discloses that clients using the virtual private

networks are responsible for accepting or rejecting calls when the virtual private network

is in the overload condition (see column 8, lines 2-4). Therefore, the controller returning

in response to a request to establish a sub-logical link, a message rejecting the request

reads on the client rejecting a call when the virtual private network is in the overload

condition. Furthermore, the controller commencing a communication of the traffic,

which meets the specified condition when receiving the response message, reads on

the client accepting a call when the virtual private network is in the overload condition.

In regards to claim 13, Ma discloses that ATM switch 130K in figure 2 can adjust,

alter, create or destroy the size of the virtual path as instructed by bandwidth manager

150 so that call requested by a client to control module 140 can be made (see column

7, lines 31-36). Therefore, when a communication of the traffic which meets the

specified condition is completed reads on the bandwidth manager dynamically adjust

the size of the virtual path based on the current load condition (see column 7, lines 26-

31). Furthermore, the controller transmitting a message requesting an establishment

release of the sub-logical link corresponding to the traffic reads on the ATM switch

adjusting, altering, creating or destroying the size of the virtual path so that the call

requested by a client can be made.

In regards to claim 14, the CAC at each ATM switch checks every connection

created or changed (see column 7, lines 36-38) read on the controller relaying the

release request message to a subsequent apparatus.

In regards to claim 15, the CAC 145 determines what virtual paths are needed

depending upon factors such as existing or expected load conditions (see column 7,

lines 20-26). Therefore, the traffic monitor for monitoring a traffic amount, which meets

the specified condition, reads on the CAC 145. Furthermore, ATM switch 130K in figure

2 can adjust, alter, create or destroy the size of the virtual path as instructed by

bandwidth manager 150 so that call requested by a client to control module 140 can be

made (see column 7, lines 31-36). Therefore, the controller releasing the establishment

of the sub-logical link when the traffic amount becomes smaller than a predetermined

amount reads on the ATM switch adjusting, altering, creating or destroying the size of

the virtual path so that the call requested by a client can be made.

In regard to claim 23, Ma discloses that clients in a virtual private network (VPN)

are responsible for prioritizing their own calls; for example, a client can drop a data

application call to accommodate a voice call (see column 8, lines 5-9). Therefore, the

controller determining a sub-logical link to decrease a number of physical links by a

priority of the sub-logical link reads on the client dropping a data call to accommodate a

voice call.

In regards to claim 24, Ma discloses in figure 1B, that various ATM edge switches 130 are interconnected with one another via physical interface or transmission facilities 131 (see column 6, lines 45-47). Therefore, a collector for receiving the traffic from an opposite apparatus reads on the interface 131, which connects one ATM edge switch to another so that traffic can travel between the two switches.

Response to Arguments

Applicant's arguments filed 08/03/2006 with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Accordingly, the current office action is mad non-final.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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